

Appl. No. 10/660,417
Amdt. Dated 2/25/2004
Reply to Office Action of 2/12/2004

REMARKS

Discussion of Claim Rejections - 35 USC § 112

Claims 1-20 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention because the term "cannellure" in claims 1-20 was found to be unclear to its meaning and indefinite. Applicant has corrected the spelling of "cannelure" in the specifications and the claims and respectfully submits that the specification and claims as amended are now in compliance with 35 U.S.C. 112, second paragraph.

The term "cannelure" is defined as follows :

Webster's 1913 Dictionary

Definition: \Can"ne*lure\ (k[a^]n"n[-e]*l[-u]r), n. [F., fr. canneler to groove.] (Mil.)
A groove in any cylinder; specif., a groove around the cylinder of an elongated bullet for small arms to contain a lubricant, or around the rotating band of a gun projectile to lessen the resistance offered to the rifling. Also, a groove around the base of a cartridge, where the extractor takes hold.

The drawings and specification as originally submitted (but for the misspelling) fit into this definition as shown, for example, in Fig. 2, where reference numbers 15, 17 and 54 indicate grooves (or cannelures) among others.

Discussion of Claim Rejections - 35 USC § 102 and 103

In contrast to the prior art, applicant's invention provides obturators offering a lightweight mechanism to seal the gases in puller sabot, cased telescoped ammunitions ("CTA") and/or ammunition used with a conventional tube having a forcing cone without dependence on JRTV sealing material for sealing between the obturator and the projectile.

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This is made possible through the claimed structure including, as claimed in Claim 1 (currently amended):

"at least one gun tube side **cannelure**;
at least one projectile side **cannelure** located opposite to the at least one gun tube side **cannelure**, where the at least one gun tube side **cannelure** is conformed to seal around the projectile" (Emphasis added).

Claims 1, 3-6, 12, 13 and 19 were rejected under 35 U.S.C. 102(b) as being anticipated by Campoli (4,444,113). Applicant respectfully traverses this rejection because neither Campoli, nor any of the other references meet the claimed limitations as shown above, whether taken singly or in any combination. Campoli, in fact, teaches away from the invention because Campoli requires the use of "a rubber like material 62" to fill voids (Col. 3, L.15-16). Campoli's obturator 22 does not include any gun tube side grooves or cannellures as is evident in FIG. 1 showing a smooth surface on the gun tube side. None of the other references supply the elements of the claims. Therefore, Claims 1, 3-6, 12, 13 and 19 are allowable over Campoli and any of the other references whether taken singly or in any combination.

Since all of the claims as previously presented or amended include at least the limitation to a gun tube side cannellure, all of the claims 1-20 are allowable under analogous arguments.

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Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone George A. Leone, Applicants' Attorney at 763-767-2762 so that such issues may be resolved as expeditiously as possible. Reconsideration and further examination is respectfully requested. For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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Date

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